



ARIZONA SCHOOL REPORT CARD ACADEMIC YEAR 2004-05

3625 W Cactus Rd, Phoenix, AZ 85029

Glendale Union High School District

Arizona's report cards have been revised to include requirements in the federal No Child Left Behind Act, such as Adequate Yearly Progress and the disaggregation of student level data into required subgroups.

AZ LEARNS¹

High School Achievement Profile ^(a)

2003-04 Performing
2002-03 Highly Performing
2001-02 Maintaining

(a) For additional information, please refer to Achievement Profiles Page near end of document.

School Overview

Principal/Administrator : Dr. Linda Rosness
Schedule : 7:00 AM to 4:30 PM
Grades : 9-12
2004 Enrollment : 1705
Web Address : www.guhsdaz.org/schools/moonvalley.asp
Phone Number : (623) 915-8000
Fax Number : (623) 915-8070
E-mail : Ldrosnes@guhsdaz.org

Mission

The Glendale Union High School District's mission is 'To empower all students for the choices and challenges of the 21st Century.' Moon Valley's goal is 'SUCCESS: Every Student, Every Day'.

No Child Left Behind

Adequate Yearly Progress ^(b)

2003-04 Met
2002-03 Met
2001-02 N/A

School Improvement Status ^(b)

2003-04 N/A
2002-03 N/A
2001-02 N/A

(b) For additional information, please refer to the AYP page in this report card.

School / Academic Goals

- ü MVHS will ensure that all students will have a challenging college preparatory curriculum including business and technology.
- ü MVHS will ensure that all students graduate with the technical skills necessary to prepare them for the demands of the 21st Century.
- ü MVHS will ensure the development of the physical and emotional well-being of our students through athletics and extracurricular programs.
- ü MVHS will ensure alignment to the Arizona Academic Standards and work to further develop reading and writing across the curriculum.

Enrollment

October 1, 2003 School Year Student Enrollment : 1688
Accepting New Students in 2004-05 Under Open Enrollment Law : ² Yes
Number of Students Attending Under Open Enrollment in 2003-04 : 292

Instructional Programs

- ü Advanced Placement/Honors Classes
- ü Computer Technology/Cisco Networking
- ü Fire Science Program
- ü Hospitality/Culinary Arts Programs
- ü NJROTC Program
- ü SAT/ACT Prep Classes
- ü Business/Community College Partnerships
- ü School-to-Career Programs

Calendar Information

Number of Instruction Days :	180
Average Daily Instruction Time :	6 hours 0 minutes
First Day of School :	8/9/2004
Last Day of School :	5/25/2005

Shared Responsibilities

School

Quarterly newsletter mailed which contains articles of special interest, interim reports which give information on student's academic progress, fourth tardy reports and reports mailed on state test results.

Parents

Each student in our school has the right to a quality education. To ensure that each student enjoys that right, there are district policies and procedures which address student attendance, tardiness, disruptive behavior and appropriate dress.

Transportation Policy

Attendance boundaries: West boundary of 51st Avenue; East boundary of Black Canyon Hwy; South boundary of Peoria Ave. and North boundary of Thunderbird Rd. Students in the district who reside more than 1 1/2 miles from school may ride school buses.

School Honors

Awards or Special Recognition Received By the School, Staff or Students

Award/Honor	Year
ü AZ School Public Relations Assn Award of Excellence	2003
ü Bernard Stewart Distinguished Service Award	2003
ü National Weightlifting Title	2002
ü Silver Apple Award	2004

Arizona's Instrument to Measure Standards (AIMS) Results 2003-04 ³

10th Grade

Mathematics	# Tested			% Tested			MSS			% FFB			% A			% Met			% Exceeded		
	S	D	AZ	S	D	AZ	S	D	AZ	S	D	AZ	S	D	AZ	S	D	AZ	S	D	AZ
All Students	418	3443	65934	100	99	100	504	500	492	26	33	43	21	20	18	35	29	24	19	19	15
All Students (Prior Year)	367	3309	57534	100	99	91	505	501	491	26	34	46	20	19	16	33	28	23	21	19	15
Female	193	1680	32586	100	99	100	503	500	491	25	33	44	21	20	19	37	30	24	17	17	14
Male	224	1755	33226	100	98	99	505	501	493	27	33	42	20	19	18	32	27	24	20	20	16
African American	30	251	3042	97	99	98	490	488	478	54	46	58	11	23	19	25	21	17	11	10	6
Hispanic	91	1194	21740	100	99	100	493	487	475	41	47	63	28	21	17	18	22	15	13	10	5
Asian/Pacific Islander	11	102	1643	100	99	99	507	511	519	10	25	23	20	14	13	60	33	30	10	28	34
American Indian/Alaskan Native	NC	86	4351	NC	95	99	NC	499	472	NC	27	68	NC	22	16	NC	36	13	NC	15	4
White	277	1802	34819	100	99	99	509	510	505	19	22	27	19	18	20	40	34	31	22	26	22
Students with Disabilities	40	318	6507	100	98	100	NA	462	456	NA	82	83	NA	10	9	NA	8	6	NA	0	2
Students without Disabilities	378	3125	59427	100	99	100	504	501	494	26	32	41	21	20	19	35	29	25	19	19	16
Limited English Proficient Students	26	315	6793	100	100	100	481	468	464	68	72	79	12	14	11	16	10	8	4	4	2
Migrant Students	--	--	708				--	--	469	--	--	72	--	--	15	--	--	10	--	--	3
Economically Disadvantaged	125	642	18745				492	486	475	45	50	64	18	20	16	28	20	15	9	10	5
Non-Economically Disadvantaged	293	2801	47182				509	504	499	18	29	35	22	19	19	38	31	27	22	21	19

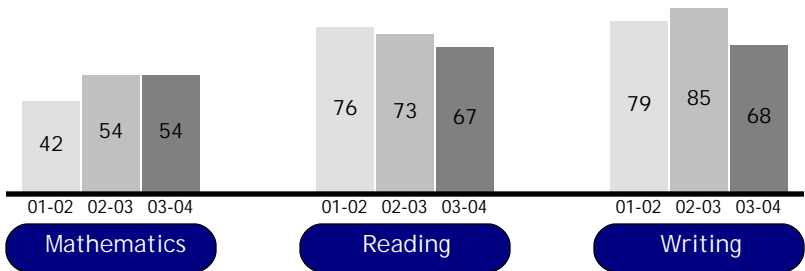
Reading	# Tested			% Tested			MSS			% FFB			% A			% Met			% Exceeded		
	S	D	AZ	S	D	AZ	S	D	AZ	S	D	AZ	S	D	AZ	S	D	AZ	S	D	AZ
All Students	438	3592	68162	100	100	100	514	514	509	13	14	18	20	22	24	61	56	51	6	8	8
All Students (Prior Year)	359	3301	56700	98	99	89	522	521	512	9	8	15	18	20	23	62	60	52	11	12	10
Female	200	1735	33509	100	100	100	518	517	513	10	13	15	18	20	23	66	58	52	6	9	9
Male	237	1854	34521	100	99	100	512	510	505	15	16	20	21	23	24	58	55	49	6	7	7
African American	33	269	3163	100	100	99	492	499	497	24	20	22	33	33	30	39	45	46	3	3	3
Hispanic	93	1263	22624	100	99	100	500	496	487	25	24	32	21	27	31	52	46	35	2	3	2
Asian/Pacific Islander	12	109	1666	100	100	100	491	502	523	17	17	11	42	29	17	42	50	60	0	5	12
American Indian/Alaskan Native	NC	90	4592	NC	97	100	NC	499	484	NC	15	32	NC	33	37	NC	51	30	NC	1	1
White	291	1853	35727	100	99	100	523	529	526	7	6	7	16	16	17	68	66	64	8	12	12
Students with Disabilities	46	340	6845	100	100	100	474	472	468	38	47	53	41	33	29	19	19	18	3	1	1
Students without Disabilities	392	3252	61317	100	99	100	518	516	512	11	12	15	18	21	23	65	59	53	6	8	8
Limited English Proficient Students	28	337	7152	100	100	100	465	460	464	57	65	57	29	25	31	14	10	12	0	0	0
Migrant Students	--	--	745				--	--	469	--	--	51	--	--	31	--	--	17	--	--	1
Economically Disadvantaged	134	700	19528				499	495	487	23	25	31	24	30	32	50	43	34	3	2	2
Non-Economically Disadvantaged	304	2892	48595				521	518	518	8	12	13	18	20	20	66	60	57	7	9	10

Writing	# Tested			% Tested			MSS			% FFB			% A			% Met			% Exceeded		
	S	D	AZ	S	D	AZ	S	D	AZ	S	D	AZ	S	D	AZ	S	D	AZ	S	D	AZ
All Students	434	3575	67629	100	99	100	550	545	524	16	16	22	16	16	16	63	62	59	5	6	3
All Students (Prior Year)	352	3233	55090	96	97	87	494	494	479	9	8	16	6	6	13	85	86	70	0	1	0
Female	199	1728	33347	100	99	100	562	559	537	13	13	17	11	14	15	69	66	64	7	8	4
Male	234	1844	34151	100	99	99	539	531	512	17	20	27	22	18	18	57	58	54	3	4	2
African American	32	268	3150	97	100	99	520	523	515	30	22	24	23	23	19	40	53	56	7	2	2
Hispanic	93	1257	22313	100	99	100	519	515	493	24	26	34	21	18	19	53	53	46	1	3	1
Asian/Pacific Islander	11	106	1659	100	97	100	558	553	564	10	15	11	20	13	12	70	64	68	0	8	9
American Indian/Alaskan Native	NC	90	4528	NC	97	99	NC	530	492	NC	14	35	NC	28	21	NC	58	42	NC	0	1
White	289	1846	35593	100	99	99	563	569	547	11	9	13	14	13	14	68	69	69	7	9	4
Students with Disabilities	43	332	6712	100	99	100	452	445	445	80	61	61	0	23	18	20	17	21	0	0	0
Students without Disabilities	391	3243	60917	99	99	100	551	548	530	15	15	19	17	16	16	63	63	61	5	6	3
Limited English Proficient Students	27	329	6994	100	100	100	426	426	442	73	65	58	15	16	18	12	19	23	0	0	0
Migrant Students	--	--	732				--	--	466	--	--	44	--	--	23	--	--	33	--	--	0
Economically Disadvantaged	134	700	19310				517	508	489	26	28	35	20	21	20	51	50	44	3	2	1
Non-Economically Disadvantaged	300	2875	48278				563	553	538	11	14	17	15	15	15	68	65	65	6	7	4

NC = Not Calculated (less than 10 students) Dashes (--) = No Data Available NA = Not Applicable S = School D = District

Recent Trends in Student Proficiency on the State Standards (AIMS Test)

10th Grade Proficiency



The graph includes the percentage of students that met or exceeded the standards. NC = Not Calculated. Under the Family Educational Rights and Privacy Act of 1974 (FERPA), no individually identifiable references to students may be made. Therefore, items of data containing information about fewer than ten (10) students have been replaced with NC.

The table below shows the schools that met or did not meet based on federal AYP requirements. To meet AYP for the year, all applicable goals must be met. If Adequate Yearly Progress (AYP) is different from the AYP Determination Page, it is due to an appeal and the underlying data is not changed.

AYP Determination	Met Percent Tested?	Y
	Met Test Objectives?	Y
	Met Attendance Rate?	Y
	Met Graduation Rate?	Y
	Made AYP?	Yes

Glossary:

Adequate Yearly Progress

A measure of school performance as mandated by the federal government in the No Child Left Behind. AYP holds schools accountable for the performance of subgroups, as well as all students. AYP measures school toward the goal of having 100 percent of all students proficient in state standards for reading and math by 2013-14.

Met Percent Tested:

The school or district tested at least ninety-five percent (95%) of its students enrolled at the time of the test administration. Schools and districts must test at least 95 percent of their student in order to make AYP.

Met Test Objectives:

The percentage of students in the school or district that demonstrate proficiency in state standards by passing the AIMS test meets or exceeds the goal for that year. No Child Left Behind requires that Arizona set goals, called Annual Measurable Objectives, for the percentage of students passing AIMS for all public schools and districts in the state. The goals increase over time toward 100 percent passing by 2014. To meet the test objectives, every subgroup in the school must meet the Annual Measurable Objective.

Met Attendance Rate:

The school or district had an attendance rate of at least 94 percent over the first 100 days of the academic year. Schools and districts not serving high school students must have an attendance rate of 94 percent, or show a one-percentage-point improvement over the previous year, in order to make AYP.

Met Graduation Rate:

The school or district had a four-year graduation rate of 71 percent or greater. School or districts granting a high school diploma must have a graduation rate of 71 percent, or show a one-percentage-point improvement over the previous year, in order to make AYP.

School Improvement - Year 1:

Schools that have not made adequate yearly progress for two consecutive years are required to be identified for school improvement. These schools must write a school improvement plan, set aside funds for teacher training, implement the plan and offer Public School Choice (transportation) to the parents of all students attending the school.

School Improvement - Year 2:

Schools that have not made adequate yearly progress for three consecutive years are identified for school improvement for the second year. These schools must continue the school improvement requirements from Year 1. In addition, they must offer Supplemental Educational Services (tutoring) to the parents of eligible students attending the school.

Corrective Action:

Schools that have not made adequate yearly progress for four consecutive years are identified for Corrective Action. These schools must continue the school improvement requirements from Year 2. In addition, the district or charter holder must implement one corrective action from a list of six possible actions as stated in the No Child Left Behind Act of 2001.

For More Information on AYP, visit our website at www.ade.az.gov/azlearns and go to NCLB link

Stanford Achievement Test, Ninth Edition (SAT-9) Results

Stanford 9 Percentile Rank Scores

Grade	Content Area	2001-2002				2002-2003				2003-2004			
		%	Score	D	AZ	%	Score	D	AZ	%	Score	D	AZ
9	Reading	100	47	40	37	96	41	40	41	88	45	NA	42
	Language	100	49	46	38	98	46	45	42	88	46	50	42
	Mathematics	100	69	65	56	98	69	66	60	88	71	71	63

The Stanford 9 is a standardized, norm-referenced test. Since 1999, all students in grades 2 through 9 have been tested in Reading, Mathematics and Language. The percentage (%) of eligible students tested and the school's percentile ranks are listed above. State average percentile ranks for Arizona and District are provided for comparison. Note that the average percentile ranks for the nation are 50 for all content areas in all grades. Under the Family Educational Rights and Privacy Act of 1974 (FERPA), no individually identifiable references to students may be made. Therefore, items of data containing information about fewer than ten students have been replaced with NC (not calculated) to protect student privacy. Some columns contain dashes (-) to indicate "no data available."

Moon Valley High School

School Site Council

Council Composition

- 2 School Administrator(s)
- 2 Non-certified Employee(s)
- 3 Teacher(s)
- 2 Parent(s)
- 0 Community Member(s)
- 2 Student(s)

Council Duties

- Ü North Central Association Accreditation
- Ü Future Planning/Review of School Surveys
- Ü Evaluate School Effectiveness
- Ü Communicate with Students/Parents/Staff
- Ü Cultural Diversity
- Ü Maintain Positive School Climate

Staffing Information for School Year 2004-05

Position	Number	Position	Number
Administrator	4.00	Teacher	81.00
Other Professional Staff	8.00	Teacher Aide	14.00

Years of Teaching Experience for School Year 2004-05

Experience	Bachelor's	Master's	Doctorate	Other
3 or fewer years	13	1	0	0
4 to 6 years	9	1	0	0
7 to 9 years	5	7	0	0
10 or more years	19	29	0	0

Highly Qualified (NCLB) & Core Academics

Core academic teachers meeting the definition of Highly Qualified (NCLB):	72
Core academic classes taught by Highly Qualified (NCLB) teachers.	0
Teachers with Emergency Certificaton.	5

Resources Available at School Site

Special Facilities

- Ü Applied Tech-CAD/Culinary Arts/Cisco Lab
- Ü Read 180 Lab
- Ü Multimedia Center/Six Computer Labs
- Ü Two Multi-Purpose Gymnasiums

Extracurricular Activities

- Ü More Than 50 Special Interest Clubs
- Ü National Honor Society
- Ü Close-Up/NJROTC/Rocket Town
- Ü Interscholastic Athletics
- Ü Theatre/Music/Dance Programs
- Ü Student Government/Service Clubs
- Ü DECA/Key Club/SADD
- Ü Community Service Emphasis

Social Services

- Ü Counseling Services
- Ü Peer Mediation/Peer Tutors
- Ü Title I
- Ü Crisis Intervention Program
- Ü Social Worker
- Ü Free/Reduced Lunch Program
- Ü School Psychologist

Indicators of Success Based on Historical Data from 2003-04

School Achievements/Accomplishments 2003-04

- ü The graduating class of 2004 received over two million dollars in scholarships of which 149 thousand dollars were athletic scholarships.
- ü Moon Valley's scores on Stanford 9 and AIMS were above state averages in Math, Writing, and Reading.
- ü Moon Valley faculty member, Kellie Bagby, was awarded the Silver Apple Award for Excellence in Teaching from TV news Channel 10.
- ü Moon Valley's dropout rate for the 2003-2004 school year was 1.9 percent. Moon Valley is highly successful academically while keeping students in school through specialized schedules facilitating one-on-one assistance.

Student Activity Rates for School Year 2003-04

		Arizona		
		% K-6	% 7-8	% 9-12
Attendance Rate ⁴	95	95	93	95
Transfers Out ⁵	--	21	20	24
Transfers In ⁶ (Within District)	--	2	2	2
Transfers In ⁷ (Out of District)	--	10	9	9
Promotion Rate ⁸	--	98	98	94
Retention Rate ⁹	--	1	1	5
Dropout Rate ¹⁰	--	NA		3
Status Unknown ¹¹	--			2
Graduation Rate ¹²	89			77

NA = Dropout Rate, status unknown and graduation rate does not apply to K-8. Dashes (--) = data not verified or school did not submit data.

Measure of Academic Progress

No MAP data found for this school.

The MAP is an elementary school (Grades 2-8) indicator only.

Arizona's Measure of Academic Progress (MAP) is an indicator of student academic growth from one year to the next. The results are based on the Stanford Achievement Test, Ninth Edition (Stanford 9), given in 2003-04. MAP includes only those students who were tested both years in consecutive grade levels at the same school or who started the school year in the same school in which they were tested in 2004. A student achieves One Year's Growth (OYG) if he or she remains in the same Stanine or advances a Stanine from one year to the next. There are two exceptions to this growth: 1) Students who begin in stanine 9 and move to stanine 8 will make OYG and 2) Students that stay in stanine 1 from one year to the next will not make OYG. The percentage of students achieving OYG at the school is reported above.

NC = Not Calculated (less than 10 matches) Dashes (--) = No Data Available

Stanines are normalized standard scores that range from a low of 1 to a high of 9, with 5 designating average performance. National Stanines, like National Percentile Ranks, indicate a student's relative standing in the national norm group (Source: Harcourt Educational Measurement).

School Safety

School-level Efforts to Ensure a Safe and Healthy Learning Environment

MVHS is continuing its emphasis on cultural diversity and group conflict counseling. We take pride in our strong partnership with the Cactus Police Precinct. MVHS has a well-defined Crisis Intervention Plan that provides for emergencies.

Total number of incidents that occurred on the school grounds that required the intervention of local, state or federal law enforcement (A.R.S.15-746.6) :

4

The Arizona Attorney General's Office has a hotline that allows students to report suspicious activities at schools and to get help with potentially violent situations, such as bullying, harassment, hate crimes, discrimination and gangs. The toll-free number, 1-877-900-1086, is anonymous and available 24 hours a day.

Contacts

	Name	Phone Number
School Site Council	Linda Rosness	(623) 915-8000
Transportation Policy	Eddie Astorga	(623) 435-6084
Community Resources	Kim Dismuke	(623) 915-8073
School Nutrition Programs	Yome Gokool	(623) 435-6016
Parent Organization	Ann Graber	(623) 915-8000
Student Health/Nurse	Renny McGovern	(623) 915-8003

The Arizona School Report Card was prepared by the Arizona Department of Education using a standardized format to combine information provided by the local school with data compiled from state records. Each school has special strengths and needs, and all schools benefit from the active involvement of parents in their children's education. If you have questions about the report card or need more information, contact the school office. Arizona School Report Cards can be found for all schools at www.ade.az.gov/srcs on the Internet. "The Arizona Department of Education of the State of Arizona does not discriminate on the basis of race, religion, color, national origin, sex, disability or age in its programs, activities or in its hiring and employment practices. If you have questions or grievances related to this policy, please contact the Administrative Services DAS at (602) 542-3186."

Arizona's Achievement Profiles capture the performance level of every school.

DEFINITIONS:

Failing to Meet the Academic Standards - needs to meet state performance and state progress goals.

School performance has been designated as Underperforming for three consecutive years and a site review determined that the designation of Failing to Meet the Academic Standards was warranted.

Underperforming - needs to meet state performance and state progress goals.

School receives total scale value placing it in the Underperforming classification. School performance was below the state baseline in 2000/2001 and did not make adequate growth, or the school started above the state baseline and did not make adequate growth during the past three years.

Performing - meets state performance goals, and meets state progress goals.

School receives total scale value placing it in the Performing classification. School performance was at or above the state baseline in 2000/2001 and/or the school made adequate growth during the past three years.

Highly Performing - meets or exceeds state performance and state progress goals and has the requisite percentage of students "Exceeding the Standard" category on AIMS.

School receives total scale value placing it in the Highly Performing classification. School performance was at or above the state baseline in 2000/2001 and/or the school made adequate growth during the past three years. Additionally, the school met the performance threshold required for Highly Performing schools with a certain percentage of their students "Exceeds the Standard" category on the Arizona Instrument to Measure Standards (AIMS) over the past three years.

Excelling - meets or exceeds state performance and state progress goals and has the requisite percentage of students "Exceeding the Standard" category on AIMS.

School performance was at or above the state baseline in 2000/2001 and/or the school made adequate growth during the past three years. Additionally, the school met the performance threshold required for Excelling schools with a certain percentage of their students exceeding the standard on the Arizona Instrument to Measure Standards (AIMS) over the past three years.

Footnotes

1 For an explanation of the Achievement Profiles, please visit our website at www.ade.az.gov/azlearns.

2 Under ARS 15-816, school district governing boards must implement open enrollment programs and establish policies covering admission criteria, application procedures and transportation provisions. For more information, contact the school district office.

3 Arizona's Instrument to Measure Standards (AIMS) includes the reading, writing and mathematics subject areas. AIMS was administered to all students in grades 3, 5, 8, and 10 in the spring of 2000. In the spring of 2001, grades 3, 5, 8, 10 and 11 were tested; students tested in grade 11 consisted of students retaking AIMS who did pass in grade 10 plus any new students. In the spring of 2002, grades 3, 5, 8, 10, 11, and 12 were tested; students tested in grades 11 and 12 were either re-testing or were new. As a result, the number of students tested in grades 11 and 12 is smaller than the number of students tested in grade 10. The proficiency levels include: Falls Far Below (FFB) the standard, Approaches (A) the standard, Meets or Met the standards, and Exceeds. MSS: The Mean Scaled Score (average) on a 200-800 scale. A student must have achieved a scale score of 500 to meet the standard. Scale scores are not comparable among content areas. Migrant, Economically Disadvantaged and Non-Economically Disadvantaged % tested for 2002-03 are not available, however, they will be calculated in the future. The federal law, No Child Left Behind, requires disaggregation in subgroups and ethnicity. NC= Not Calculated. Under the Family Educational Rights and Privacy Act of 1974 (FERPA), no individually identifiable references to students may be made. Therefore, items of data containing information about fewer than ten (10) students have been replaced with NC. No Data Available is replaced with dashes (--). For more information on testing and Arizona Academic Standards go to www.ade.az.gov/standards

4 Attendance Rate: Percentage of students attending the first 100 days of the academic year.

5 Transfers Out: Percentage of accountable students withdrawing to continue studies in another school or to be taught at home for the 2003-04 school year.

6 Transfers In (Within District): Percentage of accountable students entering school who were previously enrolled in another Arizona public school within the school district during the 2003-04 school year.

7 Transfers In (Out of District): Percentage of accountable students entering school who were previously enrolled in another school district during the 2003-04 school year.

8 Promotion Rate: Percentage of students promoted to the next grade or who met graduation requirements and received a traditional diploma at the end of the 2003-04 school year. Percentage includes students who left school at age 22 or who had completed school and received a non-traditional diploma.

9 Retention Rate: Percentage of students retained at the end of the 2003-04 school year.

10 Dropout Rate: Percentage of students counted as withdrawn due to chronic illness, expulsion or dropping out during the 2003-04 school year, to include activity during the summer of 2003. This rate includes students who were withdrawn after 10 consecutive days of unexcused absences or were coded by the school as "status unknown." The Promotion Rate, Retention Rate and Dropout Rate may not add to 100% due to the inclusion of summer activity in the Dropout Rate but not in the Promotion Rate and Retention Rate.

11 Status Unknown: Percentage of students unaccounted for by any method during the 2003-04 school year. Status unknown students are not necessarily dropouts.

12 Graduation Rate: The graduation rate presented here is a 5 year cohort rate for the class of 2003. For more information on the Graduation Rate Study published by the ADE, please see our website at www.ade.az.gov/grad.

Printed in Phoenix, Arizona, by the Arizona Department of Education. February 2005

Total cost of printing: 12 Pages X .0318 Per page X 400 Copies = \$153.00

** If total cost of printing = \$0.00, the school elected to only provide the electronic version of the report card.

** Due to booklet size printing, print copies are produced in multiples of 4.